REMARKS

Examiner T. Henn, is thanked for the thorough examination and search of the subject Patent Application. Claims 1, 26, 35, and 39 have been amended. Claims 2, 5, 11, 24, 25, 27, 34, 37, and 38 have been canceled.

The making FINAL of the Restriction requirement is noted. Non-elected Claims 2, 5, 11, 24, 25, 27, 34, 37, and 38 are hereby canceled. A divisional application will be filed to Claims 2, 5, 11, 24, 25, 27, 34, 37, and 38 once the elected Claims are allowed.

All Claims are believed to be in condition for Allowance, and that is so requested.

Reconsideration of Claims 1, 3, 4, 6-8, 12, 15, 16, 19, 20, 26, 28-31, 33, 35, and 36 rejected under 35 U.S.C. 102(b) as being anticipated by Boisvert et al (US Patent 5,329,312) is requested based on Amended Claims 1, 26, and 35, and on the following remarks.

Applicant agrees that Boisvert et al teaches a method and circuit for image processing. However, Boisvert et al does not

appear to disclose an important feature of Applicant's claimed invention particularly as recited in Amended Claims 1, 26, and 35. In particular, Amended Claim 1 now reads:

1. (Currently Amended) A color imaging system for compensating a color response, the system comprising:

an array of pixel sensor elements;

a color filter including a plurality of color filter components organized in a predefined pattern, the color filter overlaying at least a portion of the array, wherein said pixel sensor elements include at least one element associated with a first color filter component, at least one element associated with a second color filter component, and at least one element associated with a third color filter component;

a first analog compensation unit coupled to the at least one element associated with the first color filter component, said first analog compensation unit adapted to modify a readout of the at least one element associated with the first color filter component;

a second analog compensation unit coupled to the

at least one element associated with the second color filter component, and second analog compensation unit adapted to modify a readout of the at least one element associated with the second color filter component;

an analog summing amplifier coupled to two elements associated with the third color filter component and outputting an analog sum of said two elements;

a third analog compensation unit coupled to said analog sum ~~the at least one element associated with the third color filter component~~, said third analog compensation unit adapted to modify a readout of said analog sum ~~the at least one element associated with the third color filter component~~; and

an array controller adapted to control the readout of the elements associated with the first, second and third color components.

The amendment to Claim 1 specifies that the color imaging system include an analog summing amplifier. This amplifier corresponds to element 154 on Fig. 4 and is described on page 14 of the specification. Similarly, Claims 26 and 35 have been amended to

include this limitation. In particular, Amended Claim 26 now reads:

> 26. (Currently Amended) A method of compensating a color response in an analog domain of an array of pixel sensor elements, the method comprising:
>
> amplifying an analog output from a plurality of elements of a first color component;
>
> amplifying an analog output from a plurality of elements of a second color component <u>wherein two said element outputs are summed together prior to said amplifying</u>; and
>
> generating a compensated analog readout of the plurality of elements of the first color component.

Applicant has carefully reviewed the teachings of Boisvert et al and has found no reference to the above-described summing amplifier or a limitation wherein two elements of a color are summed prior to amplification in the variable amplifier. Therefore, since Applicant's claimed invention, as recited in Amended Claims 1, 26, and 35, recites elements and/or limitations not taught in the prior art, Applicant respectfully requests that the rejection of Claims 1, 26, and 35, under 35 USC 102(b) should be removed. Further, Claims 3, 4, 6-8, 12, 15,

16, 19, 20, 28-31, 33, and 36 represent patentably distinct, further limitations on Claims 1, 26, and 35 that should not be rejected if Claims 1, 26, and 35 are not rejected.

Reconsideration of Claims 1, 3, 4, 6-8, 12, 15, 16, 19, 20, 26, 28-31, 33, 35, and 36 rejected under 35 U.S.C. 102(b) as being anticipated by Boisvert et al (US Patent 5,329,312) is requested based on Amended Claims 1, 26, and 35, and on the above remarks.

Reconsideration of Claims 39 and 40 rejected under 35 U.S.C. 102(b) as being anticipated by Dillon et al (US Patent 4,176,373) is requested based on Amended Claim 39 and on the following remarks.

Applicant agrees that Dillon et al teaches a method and circuit for image processing. However, Dillon et al does not appear to disclose an important feature of Applicant's claimed invention particularly as recited in Amended Claim 39. In particular, Amended Claim 39 now reads:

39. (Currently Amended) A method of interpolating a color value in the analog domain in realtime, comprising:

modifying a first analog signal corresponding to the output of a first pixel element in an imager to color correct the first pixel, the first pixel element used to sense light intensity of a first color; and

modifying a second analog signal corresponding to the output of a second and a third pixel element in the imager to color correct the second and third ~~pixel~~ pixels, wherein the second and third pixel ~~element~~ elements are ~~is~~ used to sense light intensity of a second color and wherein said second analog signal is a sum of said second and third pixel elements.

Applicant has carefully reviewed the teachings of Dillon et al and has found no reference to the above-described limitation wherein two elements of a color are summed prior to amplification in the variable amplifier. Therefore, since Applicant's claimed invention, as recited in Amended Claim 39 recites elements and/or limitations not taught in the prior art, Applicant respectfully requests that the rejection of Claim 39 under 35 USC 102(b) should be removed. Further, Claim 40 represent patentably distinct, further limitations on Claim 39 that should not be rejected if Claim 39 is not rejected.

Reconsideration of Claims 39 and 40 rejected under 35 U.S.C. 102(b) as being anticipated by Dillon et al (US Patent 4,176,373) is requested based on Amended Claim 39 and on the above remarks.

Reconsideration of Claims 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) in view of Zhou et al (IEEE) is requested based on Amended Claim 1 and on the following remarks.

Applicant agrees that Boisvert et al teaches a method and circuit for image processing. However, Boisvert et al does not appear to disclose an important feature of Applicant's claimed invention particularly as recited in Amended Claim 1. Applicant has carefully reviewed the teachings of Boisvert et al and of Zhou et al and has found no teaching or suggestion of the above-described element of a summing amplifier to sum two elements of a color are prior to amplification in a variable amplifier. Therefore, Applicant believes that it would not have been obvious to one skilled in the art to practice Applicant's claimed invention based on the teachings of Boisvert et al in view of Zhou et al. Applicant therefore respectfully submits Claim 1 should not be rejected under 35 USC 103(a). Further, Claims 9 and 10 represent patentably distinct, further

limitations on Claim 1 that should not be rejected if Claim 1 is not rejected.

Reconsideration of Claims 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) in view of Zhou et al (IEEE) is requested based on Amended Claim 1 and on the above remarks.

Reconsideration of Claims 13, 14, 17, 18, 21, 22, and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) is requested based on Amended Claim 1 and on the following remarks.

Applicant agrees that Boisvert et al teaches a method and circuit for image processing. However, Boisvert et al does not appear to disclose an important feature of Applicant's claimed invention particularly as recited in Amended Claims 1 and 26. Applicant has carefully reviewed the teachings of Boisvert et al and has found no teaching or suggestion of the above-described element of a summing amplifier to sum two elements of a color are prior to amplification in a variable amplifier. Therefore, Applicant believes that it would not have been obvious to one skilled in the art to practice Applicant's claimed invention based on the teachings of Boisvert et al. Applicant therefore

respectfully submits Claims 1 and 26 should not be rejected under 35 USC 103(a). Further, Claims 14, 17, 18, 21, 22, and 32 represent patentably distinct, further limitations on Claims 1 and 26 that should not be rejected if Claims 1 and 26 are not rejected.

Reconsideration of Claims 13, 14, 17, 18, 21, 22, and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) is requested based on Amended Claim 1 and on the above remarks.

Reconsideration of Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) in view of Sano et al (IEEE) is requested based on Amended Claim 1 and on the following remarks.

Applicant agrees that Boisvert et al teaches a method and circuit for image processing. However, Boisvert et al does not appear to disclose an important feature of Applicant's claimed invention particularly as recited in Amended Claim 1. Applicant has carefully reviewed the teachings of Boisvert et al and of Sano et al and has found no teaching or suggestion of the above-described element of a summing amplifier to sum two elements of a color are prior to amplification in a variable amplifier.

Therefore, Applicant believes that it would not have been obvious to one skilled in the art to practice Applicant's claimed invention based on the teachings of Boisvert et al in view of Sano et al. Applicant therefore respectfully submits Claim 1 should not be rejected under 35 USC 103(a). Further, Claim 23 represents a patentably distinct, further limitation on Claim 1 that should not be rejected if Claim 1 is not rejected.

Reconsideration of Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al (US Patent 5,329,312) in view of Zhou et al (IEEE) is requested based on Amended Claim 1 and on the above remarks.

Applicants have reviewed the prior art made of record and not relied upon and have discussed their impact on the present invention above.

Allowance of all Claims is requested.

It is requested that should the Examiner not find that the Claims are now Allowable that the Examiner call the undersigned at 989-894-4392 to overcome any problems preventing allowance.

Respectfully submitted,

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